

This listing of claims will replace all prior versions,
and listings, of claims in the application:

1 Claim 1 (currently amended): A computer-implemented
2 method for determining equivalent descriptions for an
3 information need, comprising:
4 identifying a list of queries issued by one or more
5 users;
6 identifying a candidate pair of equivalent
7 descriptions by locating two queries that refer to the
8 same information need;
9 calculating a score for the candidate pair dependent
10 on the frequency with which the candidate pair occurs in
11 the list; and
12 determining that each half of the candidate pair is
13 an equivalent description for the information need if the
14 score calculated for the candidate pair is above a
15 defined threshold value.

1 Claim 2 (currently amended): The computer-implemented
2 method of claim 1, wherein identifying a candidate pair
3 comprises:
4 locating two queries that contain at least one term
5 in common; and
6 identifying as a candidate pair the portions of the
7 two queries that are not in common.

1 Claim 3 (currently amended): The computer-implemented
2 method of claim 1, wherein identifying a candidate pair
3 comprises:
4 identifying, in a first description, a term T1
5 having characters C_i, where i=1 through n;

6 identifying, in a second description, a sequence of
7 n terms, $T_{2_1}, T_{2_2}...T_{2_n}$; and
8 determining that term T_1 and terms $T_{2_1}, T_{2_2}...T_{2_n}$ are a
9 candidate pair if each C_i matches the first letter of T_{2_i} .

1 Claim 4 (currently amended): The computer-implemented
2 method of claim 1, wherein calculating a score comprises:
3 determining a first frequency with which the
4 candidate pair occurs within the list;
5 determining a second frequency with which one half
6 of the candidate pair occurs within the list; and
7 calculating a score based on a ratio of the first
8 frequency and the second frequency.

1 Claim 5 (currently amended): The computer-implemented
2 method of claim 1, further comprising excluding any
3 candidate pair with a frequency of occurrence in the list
4 below a defined threshold.

1 Claim 6 (currently amended): The computer-implemented
2 method of claim 1, further comprising excluding any
3 candidate pair wherein one half of the candidate pair
4 contains a misspelled term.

1 Claim 7 (currently amended): The computer-implemented
2 method of claim 1, further comprising excluding any
3 candidate pair wherein it is determined that one half of
4 the candidate pair is an alternative rather than an
5 equivalent for the second half of the candidate pair.

1 Claim 8 (currently amended): The computer-implemented
2 method of claim 7, wherein the determination comprises:

3 locating a collection of documents;
4 identifying lists within the collection, wherein
5 each list contains both halves of the candidate pair; and
6 determining that one half of the candidate pair is
7 an alternative for the second half based on the frequency
8 with which each half occurs in the lists.

1 Claim 9 (currently amended): The computer-implemented
2 method for determining equivalent descriptions for an
3 information need, comprising:
4 identifying a plurality of descriptions that are
5 associated with a plurality of information needs;
6 identifying a candidate pair of equivalent
7 descriptions by locating two descriptions that refer to
8 the same information need;
9 calculating a score for the candidate pair dependent
10 on the frequency with which the candidate pair occurs in
11 the plurality of descriptions; and
12 determining that each of the candidate pair is an
13 equivalent description for the information need if the
14 score is above a defined threshold.

1 Claim 10 (currently amended): The computer implemented
2 method of claim 9 wherein the plurality of descriptions
3 comprises an historical log of user queries.

1 Claim 11 (currently amended): The computer-implemented
2 method of claim 10, further comprising sorting the log by
3 user.

1 Claim 12 (currently amended): The computer-implemented
2 method of claim 11, further comprising sorting the log by
3 the time when the query was issued.

1 Claim 13 (currently amended): The computer-implemented
2 method of claim 9 wherein identifying a candidate pair
3 comprises:

4 identifying two descriptions that contain a common
5 term; and

6 identifying as a candidate pair the terms not in
7 common between the two descriptions.

1 Claim 14 (currently amended): The computer-implemented
2 method of claim 9 wherein identifying a candidate pair
3 comprises:

4 comparing each letter of a term in a first
5 description against the corresponding first letter of
6 terms in a second description; and

7 determining, based on the comparison, that the term
8 in the first description and the corresponding terms in
9 the second description are a candidate pair.

1 Claim 15 (currently amended): The computer-implemented
2 method of claim 9 wherein calculating a score comprises:

3 determining a first frequency with which the
4 candidate pair occurs within the plurality of
5 descriptions;

6 determining a second frequency with which one half
7 of the candidate pair occurs within the plurality of
8 descriptions; and

9 calculating a score based on a ratio of the first
10 frequency and the second frequency.

1 Claim 16 (currently amended): The computer-implemented
2 method of claim 9 wherein calculating a score comprises:
3 determining a first frequency with which the
4 candidate pair occurs within the plurality of
5 descriptions;
6 determining a second frequency with which one half
7 of the candidate pair occurs within the plurality of
8 descriptions;
9 determining a third frequency with which the other
10 half of the candidate pair occurs within the plurality of
11 descriptions;
12 calculating a score bases on a ratio of the first
13 frequency and the smaller of the second and third
14 frequencies.

1 Claim 17 (currently amended): A computer-implemented
2 method for determining synonyms, comprising:
3 obtaining a list of search queries issued by one or
4 more users;
5 sorting the list first by user and second by the
6 time when the query was issued;
7 selecting a set of adjacent queries for a single
8 user;
9 identifying, from the set, two queries that contain
10 at least one query term in common;
11 identifying as a candidate synonym pair the uncommon
12 portions of the two queries;
13 calculating a score for candidate synonym pair
14 dependent on the frequency with which the candidate
15 synonym pair occurs in the list; and

16 determining that each half of the candidate synonym
17 pair is a synonym of the other half if the score is above
18 a defined threshold.

1 Claim 18 (currently amended): The computer-implemented
2 method of claim 17, wherein calculating a score
3 comprises:

4 determining a first frequency with which the
5 candidate synonym pair occurs within the list;
6 determining a second frequency with which one half
7 of the candidate pair occurs within the list; and
8 calculating a score based on a ratio of the first
9 frequency and the second frequency.

1 Claim 19 (currently amended): The computer-implemented
2 method of claim 17, further comprising excluding any
3 candidate synonym pair with a frequency of occurrence
4 below a defined threshold.

1 Claim 20 (currently amended): The computer-implemented
2 method of claim 17, further comprising excluding any
3 candidate synonym pair wherein one half of the candidate
4 synonym pair contains a misspelled term.

1 Claim 21 (currently amended): The computer-implemented
2 method of claim 17, further comprising excluding any
3 candidate synonym pair wherein it is determined that one
4 half of the candidate synonym pair is an alterative
5 rather than an equivalent for the second half of the
6 candidate synonym pair.

1 Claim 22 (currently amended): The computer-implemented
2 method of claim 21, wherein the determination comprises:
3 locating a collection of documents;
4 identifying lists within the collection, wherein
5 each list contains both halves of the candidate synonym
6 pair; and
7 determining that one half of the candidate synonym
8 pair is an alternative for the second half based on the
9 frequency with which each half occurs in the lists.

1 Claim 23 (currently amended): A computer-implemented
2 method for determining equivalent descriptions for an
3 information need, comprising:
4 creating a list of anchor text units;
5 determining a subset of the list that refers to the
6 same information need;
7 locating, within the subset, two anchor text units
8 that contain at least one term in common;
9 identifying as a candidate pair of equivalent
10 descriptions the uncommon portions of the two anchor text
11 units;
12 calculating a score for the candidate pair dependent
13 on the frequency with which the candidate pair occurs in
14 the list; and
15 determining that each half of the candidate pair is
16 an equivalent description for the information need if the
17 score is above a defined threshold.

1 Claim 24 (original): An apparatus for determining
2 equivalent descriptions for an information need,
3 comprising:

4 means for identifying a list of queries issued by
5 one or more users;
6 means for identifying a candidate pair of equivalent
7 descriptions by locating two queries that refer to the
8 same information need;
9 means for calculating a score for the candidate pair
10 dependent on the frequency with which the candidate pair
11 occurs in the list; and
12 means for determining that each half of the
13 candidate pair is an equivalent description for the
14 information need if the score is above a defined
15 threshold.

1 Claim 25 (original): An apparatus for determining
2 equivalent descriptions for an information need,
3 comprising:
4 at least one memory having program instructions, and
5 at least one processor configured to execute the
6 program instructions to perform the operations of:
7 identifying a list of queries issued by one or more
8 users;
9 identifying a candidate pair of equivalent
10 descriptions by locating two queries that refer to the
11 same information need;
12 calculating a score for the candidate pair dependent
13 in the frequency with which the candidate pair occurs in
14 the list; and
15 determining that each half of the candidate pair is
16 an equivalent description for the information need if the
17 score is above a defined threshold.

1 Claim 26 (new): The computer-implemented method of claim
2 1 wherein the list of queries is a list of previously
3 submitted search queries.

1 Claim 27 (new): The apparatus of claim 25 wherein the
2 list of queries is a list of previously submitted search
3 queries.